

SEQUENCE LISTING

<110> Estell, David A.

<120> Proteases From Gram-Positive Organisms

<130> GC381-US

<140> US 09/462,846

<141> 2000-01-13

<150> PCT/US98/19529

<151> 1998-07-14

<150> EP 97305227.7

<151> 1997-07-15

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<170> FastSEQ for Windows Version 3.0

<210> 1

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<212> DNA

<213> Bacillus subtilis

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gaatatgcca acatacatga aaacggtgag cttggaaaaa cagaatgctg gtacattatt      360
gattgccaaa aagatgccga gattatttat ggccacaatg caacaacaaa ggaagaacta      420
actaccatga tagagcgtgg agaatgggat gagctcttgc gccgtgtaaa ggtaaagccg      480
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<210> 2

<211> 315

<212> PRT

<213> Bacillus subtilis

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Arg Thr Gly Glu Cys Trp Ala Phe Ala Ala His Gln Asn Gly Gln Ser
      35              40              45

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Val Val Gln Asn Gly Met Tyr Lys Gly Phe Thr Leu Ser Glu Leu Trp
 50 55 60
 Glu His His Arg His Leu Phe Gly Gln Leu Glu Gly Asp Arg Phe Pro
 65 70 75 80
 Leu Leu Thr Lys Ile Leu Asp Ala Asp Gln Asp Leu Ser Val Gln Val
 85 90 95
 His Pro Asn Asp Glu Tyr Ala Asn Ile His Glu Asn Gly Glu Leu Gly
 100 105 110
 Lys Thr Glu Cys Trp Tyr Ile Ile Asp Cys Gln Lys Asp Ala Glu Ile
 115 120 125
 Ile Tyr Gly His Asn Ala Thr Thr Lys Glu Glu Leu Thr Thr Met Ile
 130 135 140
 Glu Arg Gly Glu Trp Asp Glu Leu Leu Arg Arg Val Lys Val Lys Pro
 145 150 155 160
 Gly Asp Phe Phe Tyr Val Pro Ser Gly Thr Val His Ala Ile Gly Lys
 165 170 175
 Gly Ile Leu Ala Leu Glu Thr Gln Gln Asn Ser Asp Thr Thr Tyr Arg
 180 185 190
 Leu Tyr Asp Tyr Asp Arg Lys Asp Ala Glu Gly Lys Leu Arg Glu Leu
 195 200 205
 His Leu Lys Lys Ser Ile Glu Val Ile Glu Val Pro Ser Ile Pro Glu
 210 215 220
 Arg His Thr Val His His Glu Gln Ile Glu Asp Leu Leu Thr Thr Thr
 225 230 235 240
 Leu Ile Glu Cys Ala Tyr Phe Ser Val Gly Lys Trp Asn Leu Ser Gly
 245 250 255
 Ser Ala Ser Leu Lys Gln Gln Lys Pro Phe Leu Leu Ile Ser Val Ile
 260 265 270
 Glu Gly Glu Gly Arg Met Ile Ser Gly Glu Tyr Val Tyr Pro Phe Lys
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<210> 3

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<212> PRT

<213> Bacillus subtilis

<400> 3

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 35 40 45
 Arg Thr Gly Asn Leu Asn Glu Tyr Ser Glu Gln Glu Leu Leu Asp Cys
 50 55 60
 Asp Arg Arg Ser Tyr Gly Cys Asn Gly Gly Tyr Pro Trp Ser Ala Leu
 65 70 75 80
 Gln Leu Val Ala Gln Tyr Gly Ile His Tyr Arg Asn Thr Tyr Pro Tyr
 85 90 95
 Glu Gly Val Gln Arg Tyr Cys Arg Ser Arg Glu Lys Gly Pro Tyr Ala
 100 105 110
 Ala Lys Thr Asp Gly Val Arg Gln Val Gln Pro Tyr Asn Glu Gly Ala
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Leu Leu Tyr Ser Ile Ala Asn Gln Pro Val Ser Val Val Leu Glu Ala
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145 150 155 160
Cys Gly Asn Lys Val Asp His Ala Val Ala Val Gly Tyr Gly Pro
165 170 175
Asn Tyr Ile Leu Ile Lys Asn Ser Trp Gly Thr Gly Trp Gly Glu Asn
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<210> 4
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gattactatg ccggagaaaa cgaagagggg gaactcggca agacggaatg ctggtacatt 360
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<210> 5
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 <212> PRT
 <213> Bacillus subtilis

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Glu Ser Thr Gly Glu Cys Trp Ala Ile Ser Ala His Pro Lys Gly Pro
35 40 45
Ser Thr Val Ala Asn Gly Pro Tyr Lys Gly Lys Thr Leu Ile Glu Leu
50 55 60
Trp Glu Glu His Arg Glu Val Phe Gly Gly Val Glu Gly Asp Arg Phe
65 70 75 80
Pro Leu Leu Thr Lys Leu Leu Asp Val Lys Glu Asp Thr Ser Ile Lys
85 90 95
Val His Pro Asp Asp Tyr Tyr Ala Gly Glu Asn Glu Glu Gly Glu Leu
100 105 110
Gly Lys Thr Glu Cys Trp Tyr Ile Ile Asp Cys Lys Glu Asn Ala Glu

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Ile	Ile Tyr Gly His Thr	Ala Arg Ser Lys Thr	Glu Leu Val Thr Met			
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Ile	Asn Ser Gly Asp Trp	Glu Gly Leu Leu Arg	Arg Ile Lys Ile Lys			
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Pro	Gly Asp Phe Tyr Val	Pro Ser Gly Thr	Leu His Ala Leu Cys			
	165		170			175
Lys	Gly Ala Leu Val Leu	Glu Thr Gln Asn	Ser Asp Ala Thr Tyr			
	180		185		190	
Arg	Val Tyr Asp Tyr Asp	Arg Leu Asp Ser Asn	Gly Ser Pro Arg Glu			
	195		200		205	
Leu	His Phe Ala Lys Ala	Val Asn Ala Ala Thr	Val Pro His Val Asp			
	210		215		220	
Gly	Tyr Ile Asp Glu Ser	Thr Glu Ser Arg Lys	Gly Ile Thr Ile Lys			
225		230		235		240
Thr	Phe Val Gln Gly Glu	Tyr Phe Ser Val Tyr	Lys Trp Asp Ile Asn			
	245		250			255
Gly	Glu Ala Glu Met Ala	Gln Asp Glu Ser Phe	Leu Ile Cys Ser Val			
	260		265		270	
Ile	Glu Gly Ser Gly Leu	Leu Lys Tyr Glu Asp	Lys Thr Cys Pro Leu			
	275		280		285	
Lys	Lys Gly Asp His Phe	Ile Leu Pro Ala Gln	Met Pro Asp Phe Thr			
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<210> 6
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<400> 6

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catatcgata	aagtgcatac	accggaagta	aaagaagttg	gtaacgctga	gatcattggt	720
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<210> 7
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 <213> Bacillus subtilis

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Leu	Leu	Val	Lys	Leu	Leu	Asp	Ala	Asn	Met	Asp	Leu	Ser	Val	Gln	Val
				85					90					95	
His	Pro	Asp	Asp	Asp	Tyr	Ala	Lys	Leu	His	Glu	Asn	Gly	Asp	Leu	Gly
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Lys	Thr	Glu	Cys	Trp	Tyr	Ile	Ile	Asp	Cys	Lys	Asp	Asp	Ala	Glu	Leu
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Gly	Thr	Leu	Val	Leu	Glu	Ile	Gln	Gln	Asn	Ser	Asp	Thr	Thr	Tyr	Arg
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Val	Tyr	Asp	Tyr	Asp	Arg	Cys	Asn	Asp	Gln	Gly	Gln	Lys	Arg	Thr	Leu
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His	Ile	Glu	Lys	Ala	Met	Glu	Val	Ile	Thr	Ile	Pro	His	Ile	Asp	Lys
		210				215					220				
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225					230					235					240
Tyr	Val	Gln	Ser	Asp	Tyr	Phe	Ser	Val	Tyr	Lys	Trp	Lys	Ile	Ser	Gly
			245						250					255	
Arg	Ala	Ala	Phe	Pro	Ser	Tyr	Gln	Thr	Tyr	Leu	Leu	Gly	Ser	Val	Leu
			260					265					270		
Ser	Gly	Ser	Gly	Arg	Ile	Ile	Asn	Asn	Gly	Ile	Gln	Tyr	Glu	Cys	Asn
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Ala	Gly	Ser	His	Phe	Ile	Leu	Pro	Ala	His	Phe	Gly	Glu	Phe	Thr	Ile
	290				295						300				
Glu	Gly	Thr	Cys	Glu	Phe	Met	Ile	Ser	His	Pro					
305					310					315					